REMARKS

Applicants have canceled claims 1-8 and 21-34. Claims 1-8 have been canceled because they are no longer needed to claim applicants invention which is now claimed in independent claims 9 and 15 and their dependent claims. Claims 21-34 are canceled as non-elected claims. Claims 9 to 20 are pending in this application and under prosecution. Claim 9 has been amended to more clearly cover the so-called "ribbon" structure wherein

Rejection Under 35 U.S.C. 102(b) and in Alternative 103(a).

Claims 1-5, 9-11, and 15-17 have been rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over the Audier et al. article.

Examiner's Position

It is the Examiner's position that Audier et al. teach, on pages 220-221 and 223 conical-faceted shaped nanotubes, which are crystalline. The Examiner states that although the product is not described identically, no difference is seen due to the similarity in synthesis and structure reported. Claim 5 is deemed met by virtue of the well known reactivity of edge groups with air.

Applicants' Position

It is applicants' position that the graphite nanostructure materials defined in instant claims 9 through 20 are not anticipated by, or obvious in view of, the Audier et al. article. The graphitic nanostructure that is defined in instant claim 9 is a graphitic nanostructure that is represented in a simple form by Figure 1c hereof, which applicant sometimes refers to as a "ribbon' structure. Claims 9 has been amended to more clearly define this structure. Such a structure contains a plurality of discontinuous graphite platelets aligned parallel to the longitudinal axis. The term discontinous refers to the platelets being separate and not joined as in Figure 1d hereof, which represent what applicants sometimes call the "multifaceted tubular structure". The multifaceted tubular structures have substantially more edge sites then the cylindrical tubular microstructures

represented by the prior art. Audier et al. teach no such "multifaceted" or "ribbon" structures. Audier et al. teach cylindrical tubes have a hollow core, filaments, and shells. There is no suggestion of so-called "ribbon" or "multifaceted tubular" structures.

Further, the conditions under which it is possible to grow the "ribbon" or "multifaceted" structure are not taught in Audier et al. For example, all of the nanostructures of Audier et al. were grown using carbon monoxide, not a mixture of carbon monoxide and hydrogen at the temperatures as shown in the data tables of the instant application.

Therefore, in view of the above, applicants request that the Examiner reconsider and withdraw this rejection.

Rejection Under 35 U.S.C. 103(a)

Claims 5-8, 11-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Audier et al. taken with Kaner et al.

Examiner' s Postion

The Examiner contends that Audier et al. do not explicitly teach surface groups, however Kaner teaches introducing groups to functionalize nanofibers to make them more useful. The Examiner points to column10 and takes Official Notice that the claimed groups are old and known and described as groups on carbon nanofibers.

Applicants' Position

Kaner et al. teach the synthesis of carbon materials having at least a partially curved structure, such as nanotubes, encapsulated metal, or a combination thereof. Kaner et al. define, in column 3, lines18+ "partially curved structure" to mean a structure having a non-flat carbon based structure, such as found in nanotubes. The nanostructures of Kaner et al. are produced by a displacement reaction, preferably a double displacement (solid-state metathesis) reaction in which a carbon compound, such as a hydrocarbon, halogenated hydrocarbon, or halogenated carbon compound and a metal compound are metathetically reacted in the presence of a catalyst. The

reaction takes place at about 2000°C or more, which is far outside the range for producing "ribbon" or "multifaceted" graphite nanostructures. There is no suggestion of so-called "ribbon" or "multifaceted" structures as instantly claimed.

Further, the claims with limitations to functional groups are dependent on claims that applicants regard as patentable over the art and thus are patentable as well.

Therefore, applicants request that the Examiner also reconsider and withdraw this rejection.

In view of the above, it is applicants' position that the claims, as now amended, define a patentable invention over the art. Therefore, applicants request that the Examiner pass this application to allowance.

Respectfully submitted,

By _____

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